

## CLAIMS:

1. An integrated circuit comprising:
- . a substrate,
  - . a conductive layer,
  - . at least one inductive element superposed on the conductive layer and formed by a metallic
- 5 turn having an outer contour and an inner contour, which bound between them a surface referred to as the radiation surface, and
- . means for insulating the conductive layer from the inductive element, which integrated circuit is characterized in that the conductive layer has a surface substantially identical to the radiation surface.
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2. An integrated circuit as claimed in claim 1, characterized in that an active zone is integrated on a surface not covered by the radiation surface.
3. An integrated circuit as claimed in claim 1, characterized in that the
- 15 conductive layer forms an open circuit.
4. An integrated circuit as claimed in claim 1, characterized in that the conductive layer includes conductive segments.
- 20 5. An integrated circuit as claimed in claim 4, characterized in that the conductive segments are connected to a non-closed frame.
6. An integrated circuit as claimed in claim 4, characterized in that the substrate is formed with trenches perpendicular to the turn of the inductive element, the bottoms of
- 25 said trenches being covered with a low-resistance or conductive material, which forms the conductive layer.

7. An integrated circuit as claimed in claim 1, characterized by the presence of a well of a low-resistance or conductive material, which well has walls surrounding the inductive element completely, said well having at least one slot over its entire height.
- 5 8. An integrated circuit as claimed in claim 1, characterized in that it comprises two inductive elements, which two elements are connected between a terminal at a given potential and a terminal that connects the inductive element to a circuit said inductive elements being formed by a single and similar turn.
- 10 9. An oscillator adapted to supply an output signal having a frequency whose value depends on the value of a tuning voltage, characterized in that it is realized in the form of an integrated circuit as claimed in claim 1, and it includes at least one varicap diode connected to the inductive element and arranged to be biased by means of the tuning voltage.
- 15 10. An apparatus for receiving signals, comprising:  
. an antenna and filter system enabling the reception of a signal whose frequency, called radio frequency, is selected within a given frequency range, and its conversion into an electronic signal, called radio signal,  
. a local oscillator having a frequency, called oscillation frequency, which is controllable by  
20 means of a tuning voltage, and  
. a mixer adapted to receive the radio signal and a signal coming from the local oscillator and to supply an output signal having a fixed frequency equal to the difference between the radio frequency and the oscillation frequency, and  
. a signal processing unit adapted to utilize the output signal of the mixer, which apparatus is  
25 characterized in that the local oscillator is an oscillator as claimed in claim 9.